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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,642	04/08/2004	Eric G. Lovett	GUID.611PA	8502
51294 7590 03/08/2007 HOLLINGSWORTH & FUNK, LLC 8009 34TH AVE S. SUITE 125 MINNEAPOLIS, MN 55425			EXAMINER MULLEN, KRISTEN DROESCH	
		ART UNIT 3766	PAPER NUMBER	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)
	10/820,642	LOVETT ET AL.
	Examiner	Art Unit
	Kristen Drolesch Mullen	3766

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 12 December 2006.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-62 is/are pending in the application.
 4a) Of the above claim(s) 9-12, 45, 46, 58 and 59 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-8, 13-44, 47-57 and 60-62 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 4/8/04 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date: _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date: _____	6) <input type="checkbox"/> Other: _____

Election/Restrictions

1. Applicant's election with traverse of Species II in the reply filed on 12/12/06 is acknowledged. The traversal is on the ground(s) that the species are not mutually exclusive and they are capable of use together. This is not found persuasive because the specification does not disclose that the embodiments of Figs. 6 and 7 are used together, and it appears that one would use one or the other of the two systems. From the specification is unclear why or how one would use these two species of devices together.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, 8, 13-14, 19-25, 28-29, 33-41, 44, 47-54, 57 and 60-62 are rejected under 35 U.S.C. 102(b) as being anticipated by Bardy et al. (2002/0035376).

Regarding claim 1, Bardy shows a system comprising detection circuitry, energy delivery circuitry; one or more electrodes configured for subcutaneous non-intrathoracic placement and for coupling to the detection circuitry and energy delivery circuitry, and a controller coupled to the detection circuitry and energy delivery circuitry, the controller, in response to a cardiac condition requiring treatment, coordinating delivery of a selected *one of* the tachycardia,

bradycardia, and asystole prevention therapies (Paragraphs [0039], [0040], [0043]; Figs. 4-6, 9, 11, 15).

With respect to claim 21, Bardy shows a system including a housing configured for subcutaneous, non-intrathoracic placement; detection circuitry provided in the housing, energy delivery circuitry provided in the housing, one or more electrodes configured for subcutaneous, non-intrathoracic placement and coupled to the detection circuitry and energy delivery circuitry, and a controller provided in the housing and coupled to the detection circuitry and energy delivery circuitry, the controller, in response to a cardiac condition requiring treatment, delivering a selected *one of* the tachycardia, bradycardia, and asystole prevention therapies (Paragraphs [0039], [0040], [0043]; Figs. 4-6, 9, 11, 15).

Regarding claim 37, Bardy shows a method including sensing cardiac activity from a subcutaneous, non-intrathoracic location detecting a cardiac condition necessitating treatment in response to the sensed cardiac activity, and delivering *one of* a plurality of cardiac therapies to treat the detected cardiac condition, the plurality of cardiac therapies comprising at least a tachycardia therapy, a bradycardia therapy, and an asystole prevention therapy (Paragraphs [0039], [0040], [0043]; Figs. 4-6, 9, 11, 15).

The examiner has treated the “means for” limitations of claim 50 as invoking 35 U.S.C. 112, 6th paragraph. One with ordinary skill in the art will understand that the structure of the sensing circuitry (204) and subcutaneous electrodes (214) will perform the recited function of “sensing cardiac activity from a subcutaneous non-intrathroacic location”, and the diagnostics circuitry (210) will perform the recited function of “detecting a cardiac condition in response to

the sensed cardiac activity" and the shock therapy circuitry (216) and pacing therapy circuitry (230) will perform the function of "delivering one of a plurality of cardiac therapies".

The examiner considers that Bardy shows equivalent structure to the means for sensing cardiac activity from a subcutaneous, non-intrathoracic location, the means for detecting a cardiac condition necessitating treatment in response to the sensed cardiac activity, and the means for delivering *one of* a plurality of cardiac therapies to treat the detected cardiac condition, the plurality of cardiac therapies comprising at least a tachycardia therapy, a bradycardia therapy, and an asystole prevention therapy (Paragraphs [0039], [0040], [0043]; Figs. 4-6, 9, 11, 15).

Regarding claims 2-5, 22-25, 38-41 and 51-54, Bardy shows the plurality of cardiac therapies comprises a bradycardia pacing, cardiac resynchronization (cardioversion/defibrillation) antitachycardia pacing, and defibrillation (Paragraphs [0039], [0040]).

With respect to claims 8 and 28, Bardy shows the one or more electrodes are configured for cardiac pacing (15, 27, 27', 1417, 1219) and sensing (23, 25, 26, 28, 1425, 1427) (Figs. 1-3, 10, 12-14, 18).

Regarding claim 13, Bardy shows a housing where the circuitry is situated and the housing is configured for implantation (Figs. 1-3, 10, 12-14, 18).

With respect to claims 14 and 29, Bardy shows the one or more electrodes include at least one electrode (15, 26, 28, 1417, 1219, 1425, 1427) disposed on the housing (Figs. 1-3, 10, 12-14, 18).

Regarding claims 19 and 33, Bardy shows a housing within which the detection circuitry, energy delivery circuitry, and controller are situated, the housing is configured for implantation

in a patient and the one or more electrodes (15, 26, 28, 1417, 1219, 1425, 1427) are disposed in or on the housing (Figs. 1-3, 10, 12-14, 18).

With respect to claims 20 and 34, Bardy shows the housing is configured to have an arcuate shape (Figs. 12-14, 18).

Regarding claims 35-36, Bardy shows the one or more electrodes (23, 25, 26, 27, 27', 28) comprise at least one subcutaneous, non-intrathoracic electrode array coupled to the housing via a lead (21) (Figs 1-6, 9-13)

With respect to claims 44, 48, 57 and 60, Bardy shows detecting the cardiac condition at a subcutaneous, non-intrathoracic location (via electrodes 23, 25, 26, 28, 1425, 1427) and energy for the plurality of cardiac therapies is provided from a subcutaneous, non-intrathoracic source (within the housing) (Figs. 1-3, 10, 12-14, 18).

Regarding claims 48-49 and 61-62, Bardy shows delivering monophasic waveforms and delivering multiphasic waveforms (Paragraphs [0039], [0063], [0071]).

The examiner has treated the “means for” limitations of claims 57 and 60-62 as invoking 35 U.S.C. 112, 6th paragraph. One with ordinary skill in the art will understand that the structure of the sensing circuitry (204) and subcutaneous electrodes (214) and diagnostics circuitry (210) will perform the recited function of “detecting the cardiac condition at a subcutaneous non-intrathoracic location”, the structure of the power source (220) will perform the recited function of “supplying energy . . . from a subcutaneous non-intrathoracic source” and the shock therapy circuitry (216) and pacing therapy circuitry (230) will perform the function of “delivering monophasic waveforms” and “delivering multiphasic waveforms”

As explained above, the examiner considers that Bardy shows equivalent structure to the means for detecting the cardiac condition at a subcutaneous non-intrathoracic location, the means for supplying energy . . . from a subcutaneous non-intrathoracic source, the means for delivering monophasic waveforms and the means for delivering multiphasic waveforms. See rejections above for claims 57 and 60-62.

The functional language and statements of intended use have been carefully considered but are not considered to impart any further structural limitations over the prior art.

4. Claims 1-5, 8, 13-25, 28-41, 44, 47-54, 57 and 60-62 are rejected under 35 U.S.C. 102(a) as being anticipated by Bardy et al. (2002/0091414).

Regarding claim 1, Bardy shows a system comprising detection circuitry, energy delivery circuitry; one or more electrodes configured for subcutaneous non-intrathoracic placement and for coupling to the detection circuitry and energy delivery circuitry, and a controller coupled to the detection circuitry and energy delivery circuitry, the controller, in response to a cardiac condition requiring treatment, coordinating delivery of a selected *one of* the tachycardia, bradycardia, and asystole prevention therapies (Paragraphs [0035], [0036], [0039]; Figs. 4-6, 9, 11, 15).

With respect to claim 21, Bardy shows a system including a housing configured for subcutaneous, non-intrathoracic placement; detection circuitry provided in the housing, energy delivery circuitry provided in the housing, one or more electrodes configured for subcutaneous, non-intrathoracic placement and coupled to the detection circuitry and energy delivery circuitry, and a controller provided in the housing and coupled to the detection circuitry and energy delivery circuitry, the controller, in response to a cardiac condition requiring treatment,

delivering a selected *one of* the tachycardia, bradycardia, and asystole prevention therapies (Paragraphs [0035], [0036], [0039]; Figs. 4-6, 9, 11, 15).

Regarding claim 37, Bardy shows a method including sensing cardiac activity from a subcutaneous, non-intrathoracic location detecting a cardiac condition necessitating treatment in response to the sensed cardiac activity, and delivering *one of* a plurality of cardiac therapies to treat the detected cardiac condition, the plurality of cardiac therapies comprising at least a tachycardia therapy, a bradycardia therapy, and an asystole prevention therapy (Paragraphs [0035], [0036], [0039]; Figs. 4-6, 9, 11, 15).

The examiner has treated the “means for” limitations of claim 50 as invoking 35 U.S.C. 112, 6th paragraph. One with ordinary skill in the art will understand that the structure of the sensing circuitry (204) and subcutaneous electrodes (214) will perform the recited function of “sensing cardiac activity from a subcutaneous non-intrathoracic location”, and the diagnostics circuitry (210) will perform the recited function of “detecting a cardiac condition in response to the sensed cardiac activity” and the shock therapy circuitry (216) and pacing therapy circuitry (230) will perform the function of “delivering one of a plurality of cardiac therapies”.

The examiner considers that Bardy shows equivalent structure to the means for sensing cardiac activity from a subcutaneous, non-intrathoracic location, the means for detecting a cardiac condition necessitating treatment in response to the sensed cardiac activity, and the means for delivering *one of* a plurality of cardiac therapies to treat the detected cardiac condition, the plurality of cardiac therapies comprising at least a tachycardia therapy, a bradycardia therapy, and an asystole prevention therapy (Paragraphs [0035], [0036], [0039]; Figs. 4-6, 9, 11, 15).

Regarding claims 2-5, 22-25, 38-41 and 51-54, Bardy shows the plurality of cardiac therapies comprises a bradycardia pacing, cardiac resynchronization (cardioversion/defibrillation) antitachycardia pacing, and defibrillation (Paragraphs [0035], [0036]).

With respect to claims 8 and 28, Bardy shows the one or more electrodes are configured for cardiac pacing (15, 27, 27', 1417, 1219) and sensing (23, 25, 26, 28, 1425, 1427) (Figs. 1-3, 10, 12-14, 18).

Regarding claim 13, Bardy shows a housing where the circuitry is situated and the housing is configured for implantation (Figs. 1-3, 10, 12-14, 18).

With respect to claims 14 and 29, Bardy shows the one or more electrodes include at least one electrode (15, 26, 28, 1417, 1219, 1425, 1427) disposed on the housing (Figs. 1-3, 10, 12-14, 18).

Regarding claims 15-18 and 30-32, Bardy shows delivering therapy of pacing pulses at a rate varying between 2 and 40 pulses per minute (20-120 stimuli per minute, where in the lower end of the range near 20 stimuli per minute, consciousness would not be restored) (Paragraph [0078])

Regarding claims 19 and 33, Bardy shows a housing within which the detection circuitry, energy delivery circuitry, and controller are situated, the housing is configured for implantation in a patient and the one or more electrodes (15, 26, 28, 1417, 1219, 1425, 1427) are disposed in or on the housing (Figs. 1-3, 10, 12-14, 18).

With respect to claims 20 and 34, Bardy shows the housing is configured to have an arcuate shape (Figs. 12-14, 18).

Regarding claims 35-36, Bardy shows the one or more electrodes (23, 25, 26, 27, 27', 28) comprise at least one subcutaneous, non-intrathoracic electrode array coupled to the housing via a lead (21) (Figs 1-6, 9-13)

With respect to claims 44, 48, 57 and 60, Bardy shows detecting the cardiac condition at a subcutaneous, non-intrathoracic location (via electrodes 23, 25, 26, 28, 1425, 1427) and energy for the plurality of cardiac therapies is provided from a subcutaneous, non-intrathoracic source (within the housing) (Figs. 1-3, 10, 12-14, 18).

Regarding claims 48-49 and 61-62, Bardy shows delivering monophasic waveforms and delivering multiphasic waveforms (Paragraphs [0035], [0060], [0072]).

The examiner has treated the “means for” limitations of claims 57 and 60-62 as invoking 35 U.S.C. 112, 6th paragraph. One with ordinary skill in the art will understand that the structure of the sensing circuitry (204) and subcutaneous electrodes (214) and diagnostics circuitry (210) will perform the recited function of “detecting the cardiac condition at a subcutaneous non-intrathroacic location”, the structure of the power source (220) will perform the recited function of “supplying energy . . . from a subcutaneous non-intrathoracic source” and the shock therapy circuitry (216) and pacing therapy circuitry (230) will perform the function of “delivering monophasic waveforms” and “delivering multiphasic waveforms”

As explained above, the examiner considers that Bardy shows equivalent structure to the means for detecting the cardiac condition at a subcutaneous non-intrathroacic location, the means for supplying energy . . . from a subcutaneous non-intrathroacic source, the means for delivering monophasic waveforms and the means for delivering multiphasic waveforms. See rejections above for claims 57 and 60-62.

The functional language and statements of intended use have been carefully considered but are not considered to impart any further structural limitations over the prior art.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6, 26, 42 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bardy et al. (2002/0035376) as applied to claims 1, 21, 37 and 50 above and further in view of Brockway et al. (4,562,841).

Bardy is as explained before. Although Bardy fails to show the cardiac therapy comprises a rate smoothing therapy, attention is directed to Brockway who teaches rate smoothing pacing therapy. Brockway teaches that a rate smoothing therapy operates to ensure that the pacing rate from pacing interval to pacing interval does not change by more than a selected percentage of the previous interval thus providing a smoother less erratic pacing rhythm. (Col. 6, lines 49-54). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the system and method of Bardy to include a rate smoothing pacing therapy in order to ensure that the pacing rate from pacing interval to pacing interval does not change by more than a selected percentage of the previous interval thus providing a smoother less erratic pacing rhythm.

7. Claims 6, 26, 42 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bardy et al. (2002/0091414) as applied to claims 1, 21, 37 and 50 above and further in view of Brockway et al. (4,562,841).

Bardy is as explained before. Although Bardy fails to show the cardiac therapy comprises a rate smoothing therapy, attention is directed to Brockway who teaches rate smoothing pacing therapy. Brockway teaches that a rate smoothing therapy operates to ensure that the pacing rate from pacing interval to pacing interval does not change by more than a selected percentage of the previous interval thus providing a smoother less erratic pacing rhythm. (Col. 6, lines 49-54). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the system and method of Bardy to include a rate smoothing pacing therapy in order to ensure that the pacing rate from pacing interval to pacing interval does not change by more than a selected percentage of the previous interval thus providing a smoother less erratic pacing rhythm.

8. Claims 7, 27, 43 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bardy et al. (2002/0035376) as applied to claims 1, 21, 37 and 50 above and further in view of Kieval et al. (5,814,079).

Bardy is as explained before. Although Bardy fails to show the cardiac therapy comprises a sub-threshold stimulation therapy, attention is directed to Kieval who teaches a sub-threshold stimulation therapy. Kieval teaches that a sub-threshold stimulation therapy is used to prevent a tachyarrhythmia by effecting maximal cardiac relaxation and suppressing aberrant electrical activity (Abs) and sub-threshold stimulation therapy is used in combination with cardioversion/defibrillation therapy to reduce the cardioversion shock energy required (Col. 5,

lines 31-47). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the system and method of Bardy to include a sub-threshold stimulation therapy in order to prevent a tachyarrhythmia by effecting maximal cardiac relaxation and suppressing aberrant electrical activity and also to reduce the cardioversion shock energy required.

9. Claims 7, 27, 43 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bardy et al. (2002/0091414) as applied to claims 1, 21, 37 and 50 above and further in view of Kieval et al. (5,814,079).

Bardy is as explained before. Although Bardy fails to show the cardiac therapy comprises a sub-threshold stimulation therapy, attention is directed to Kieval who teaches a sub-threshold stimulation therapy. Kieval teaches that a sub-threshold stimulation therapy is used to prevent a tachyarrhythmia by effecting maximal cardiac relaxation and suppressing aberrant electrical activity (Abs) and sub-threshold stimulation therapy is used in combination with cardioversion/defibrillation therapy to reduce the cardioversion shock energy required (Col. 5, lines 31-47). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the system and method of Bardy to include a sub-threshold stimulation therapy in order to prevent a tachyarrhythmia by effecting maximal cardiac relaxation and suppressing aberrant electrical activity and also to reduce the cardioversion shock energy required.

10. Claims 17-18 and 31-32 are rejected under 35 U.S.C. 103(a) as being obvious over Bardy et al. (2002/0035376) as applied to claims 1, and 21 above and further in view of Lovett et al. (2004/0215258).

Bardy is as explained before. Although Bardy fails to show the asystole prevention therapy comprises delivery of pacing pulses at a rate lower than a pacing rate associated with the bradycardia therapy, cardiac therapy comprises a sub-threshold stimulation therapy, attention is directed to Kieval who teaches a sub-threshold stimulation therapy. Kieval teaches that a sub-threshold stimulation therapy is used to prevent a tachyarrhythmia by effecting maximal cardiac relaxation and suppressing aberrant electrical activity (Abs) and sub-threshold stimulation therapy is used in combination with cardioversion/defibrillation therapy to reduce the cardioversion shock energy required (Col. 5, lines 31-47). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the system and method of Bardy to include a sub-threshold stimulation therapy in order to prevent a tachyarrhythmia by effecting maximal cardiac relaxation and suppressing aberrant electrical activity and also to reduce the cardioversion shock energy required.

Response to Arguments

11. Applicant's arguments filed 12/12/06 have been fully considered but they are not persuasive.
12. Applicant argues that the Bardy references do not disclose energy delivery circuitry capable of delivering a plurality of cardiac therapies comprising at least a tachycardia therapy, a bradycardia therapy and an asystole prevention therapy. However, the limitation "... circuitry capable of ..." only requires that the circuitry have the ability to deliver these three specific therapies. Bardy discloses devices that have the ability to deliver anti-tachycardia pacing therapy and bradycardia pacing therapy, but applicant discloses that asystole prevention therapy is also a pacing therapy. If the devices of Bardy have the ability to deliver anti-tachycardia pacing

therapy and bradycardia pacing therapy, the Bardy devices would also possess the ability to deliver asystole prevention therapy since asystole prevention therapy is disclosed by applicant as a pacing therapy.

Conclusion

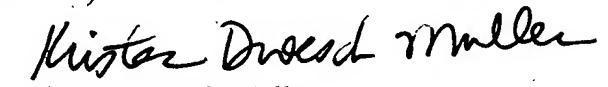
13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristen Drolesch Mullen whose telephone number is (571) 272-4944. The examiner can normally be reached on M-F, 10:30 am-6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Layno can be reached on (571) 272-4949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Kristen Droesch Mullen
Patent Examiner - Temp. Signatory
Authority
Art Unit 3766

kdm